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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,497	01/27/2004	Daniel W.J. Johnson	CNTR.2080	9540

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HUFFMAN LAW GROUP, P.C.  
1900 MESA AVE.  
COLORADO SPRINGS, CO 80906

EXAMINER
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MAI, TAN V

ART UNIT	PAPER NUMBER
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2193

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	04/12/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/12/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO@HUFFMANLAW.NET

**Office Action Summary**

Application No.

10/765,497

Applicant(s)

JOHNSON ET AL.

Examiner

Tan V. Mai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 13-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 22-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/27/04</u> . | 6) <input type="checkbox"/> Other: _____  |

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1. Applicant's election without traverse of Group I, Claims 1-12 and 22-33, in Paper dated 1/30/07 is acknowledged.
2. The abstract of the disclosure is objected to because the Abstract contains the undefined acronym "MMX" and "PSADBW". All such acronyms should be defined at the instance of their first use within the Abstract. Correction is required. See MPEP § 608.01(b).
3. Claims 1-2 and 22-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per independent claim 1, the terms "**carry** bit(s)" seem to be incorrec~~ted~~. They should be --**borrow** out--, i.e., see Uratani et al, US Pat. No. 5,610,850. Similarly noted other claims.

As per claim 3, "claim 1" should be --claim 2--.

As per claims 11-12, the claims add "computer program product" (claim 11) and "computer-readable program code" (claim 12) language resulting hybrid claims.

As per independent claim 22, the claim is incomplete in that they recite only a portion of the methodology required for the apparatus to become operational, i.e., it omits essential elements and/or steps. See MPEP 2172.01. It is noted that the preamble of claim 22 recites "an apparatus for generating a **packed sum of absolute differences** ..., the microprocessor also having **addition logic for adding the partial**

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**products"**; however, the feature(s) for performing these functions are NOT recited in the body of claim.

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 11-12 and 25-33 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claims recite "computer program product" (claim 11), "computer-readable program code" (claim 12), "method" (claim 25) and "computer data signal embodied in a transmission medium" (claim 33) for performing a mathematical function.

"[t]o satisfy section 101 requirements, the claim must be for a practical application of the Sec. 101 judicial exception, which can be identified in various ways:

- . The claimed invention "transforms" an article or physical object to a different state or thing.
- . The claimed invention otherwise produces a useful, concrete and tangible result,..."

See "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" OG Date: 22 November 2005.

Since there is no physical transform to establish a practical application, a useful, concrete and tangible result appears to be lacking. Therefore, claims 11-12 and 25-33 are directed to a non-statutory process.

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

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((b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 8-10 and 25-32 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Uratani et al, US Pat. No. 5,610,850.

Uratani et al, e.g., see Figs.10-11, teach the claimed invention. The "absolute difference" elements (101-10N) and "adders" elements (112-114) [of Fig. 10] are considered the claimed subtractors / inverters / multiplexers and adders of claim 1, respectively. See Fig. 11 for the details of the claimed subtractors / inverters / multiplexers.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 11-12 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uratani et al, US Pat. No. 5,610,850.

Uratani et al have been discussed in paragraph No. 7 above.

The claims add "computer program product" (claim 11), "computer-readable program code" (claim 12) and "computer data signal embodied in a transmission medium" (claim 33). These features are obvious to a person having ordinary skill in the art at the time the invention was made. It would have been obvious to a person having

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ordinary skill in the art at the time the invention was made to design the claimed invention according to Uratani et al's teachings because the reference is a device for generating a **packed sum of absolute differences** as claimed.

10. Claims 2-7 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uratani et al in view of Abdallah et al (Applicants' admission Prior Art).

Uratani et al have been discussed in paragraph No. 7 above.

The claims add "multiply instruction" feature. Abdallah et al (Applicants' admission Prior Art) show another **packed sum of absolute differences** device having "performing other instructions" feature, e.g., see Figs. 5-6, col. 5, line 39 to col. 6, line 39 [In Step 500 for providing the differences and borrow out signals; In Step 510 for providing the absolute values; and In Step 520 for providing other operation]. In col. 5, line 62 to col. 6, line 18 "[I]n step 520, the third operation is a packed add horizontal (PADDH) operation. For example, in a PADDH ..., 0 operation, a PMAD circuit is used to produce the result RS (an example of which is shown as 1200 in FIG. 12) having a field 1222 that represents the sum of all of the packed data elements of packed byte data G as described with reference to FIGS. 11, 12 and 13 below. The PADDH operation is also referred to as a horizontal addition operation.

These operations may be used to perform other instructions. For example, the PSUBWC and PABSRC operations may be used to perform a packed absolute difference (PAD) instruction...". Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine

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Abdallah et al "performing other instructions" feature in Uratani et al, thereby making the claimed invention, because the proposed device is a **packed sum of absolute differences** device having "performing other instructions" feature as claimed.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cited references are art of interest.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tan V. Mai whose telephone number is (571) 272-3726. The examiner can normally be reached on Mon-Wed and Fri. from 9:30am to 2:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An, can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is:

Official (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2100.



Tan V. Mai  
Primary Examiner